What is claimed is:

1. An implantable unit comprising:

an input circuit to provide a sampled signal;

a controller coupled to the input circuit wherein the controller receives the sampled signal and generates a plurality of characteristic points as a function of a curvature series based on the sampled signal, wherein each characteristic point includes a time component corresponding to a time of occurrence of a lobe of the curvature series and wherein each characteristic point includes an amplitude component of the sampled signal at the time of occurrence; and

a memory coupled to the controller and adapted to store each characteristic point of the plurality of characteristic points.

2. The unit of claim 1 wherein the controller is adapted to generate, for each characteristic point, a size component as a function of an area of the lobe of the curvature series.

3. The unit of claim 2 wherein the controller is adapted to discard without storing in the memory, a characteristic point associated with a size less than a predetermined value.

4. The unit of claim 1 wherein the controller is adapted to generate a first data set corresponding to a first group of characteristic points and the memory is adapted to store the first data set.

5. The unit of claim 4 wherein the controller is adapted to store a repetition marker corresponding to a second data set wherein the second data set includes a second group of characteristic points that substantially match the first group of characteristic points and wherein the repetition marker identifies the first data set.

6. The unit of claim 5 wherein the controller is adapted to store a time value associated with the repetition marker, the time value determined as a function of a time of occurrence of the second data set.

7. The unit of claim 4 wherein the controller is adapted to store a difference marker corresponding to a second data set wherein the second data set includes a second group of characteristic points that differs from the first group of characteristic points and wherein the difference marker identifies the first data set.

8. The unit of claim 7 wherein the controller is adapted to store difference data associated with the difference marker, the difference data corresponding to a difference between the first data set and the second data set.

9. The unit of claim 1 wherein the controller includes a processor and wherein the memory includes executable instructions accessible to the processor.

10. The unit of claim 1 wherein the controller includes hardwired circuitry.

11. The unit of claim 1 wherein the controller includes a filter adapted to generate a running average of the sampled signal.

12. The unit of claim 1 wherein the controller includes a comparator.

13. The unit of claim 1 wherein the time of occurrence of the lobe includes a time of occurrence of a centroid of the lobe.

14. A method comprising:

receiving a sample series corresponding to a signal sampled at a predetermined rate;

for each sample in the sample series, calculating a curvature to form a curvature series using a processor;

identifying a lobe in the curvature series;

calculating an area of the lobe; and

for an area greater than a predetermined value, identifying a parameter for the lobe and storing a characteristic point in a memory, the characteristic point including a time of the parameter and an amplitude corresponding to the time of the parameter.

15. The method of claim 14 wherein identifying the parameter includes identifying a centroid.

16. The method of claim 14 wherein receiving a sample series corresponding to the signal sampled at the predetermined rate includes receiving a sample series generated as a function of an electrocardiogram sampled at a predetermined rate.

17. The method of claim 14 wherein the signal is a function of a sensor signal.

18. The method of claim 14 wherein the signal is a function of time.

19. The method of claim 14 wherein the signal is a function of temperature.

20. The method of claim 14 wherein the signal is a function of an impedance.

21. The method of claim 14 further including receiving the predetermined value.

22. The method of claim 14 further including calculating the predetermined value as a function of changes in the sampled signal.

23. The method of claim 14 wherein identifying the lobe includes identifying a first time when an absolute value of the amplitude of the curvature series is greater than a first threshold and identifying a second time when the absolute value of the amplitude of the curvature series is less than a second threshold.

24. The method of claim 23 wherein the second threshold is less than the first threshold.

25. The method of claim 14 further including, for an area greater than the predetermined value, storing a code as a function of the predetermined rate.

26. The method of claim 14 wherein storing the characteristic point is performed in real time relative to receiving the sample series.

27. The method of claim 14 wherein receiving the sample series includes accessing stored sample data.

28. The method of claim 14 further including storing a repetition marker to indicate that a later plurality of characteristic points substantially matches an earlier plurality of characteristic points.

29. The method of claim 28 wherein storing the repetition marker includes storing identification data that identifies the earlier plurality of characteristic points.

30. The method of claim 28 wherein storing the repetition marker includes storing temporal data that identifies a time of occurrence of the later plurality of characteristic points.

31. The method of claim 28 wherein storing the repetition marker includes storing a code to indicate a number of consecutive repetitions of the earlier plurality of characteristic points and a time interval between consecutive repetitions.

32. The method of claim 14 further including storing a difference marker to indicate that a later plurality of characteristic points differs from an earlier plurality of characteristic points.

33. The method of claim 32 wherein storing the difference marker includes storing identification data that identifies the earlier plurality of characteristic points.

34. The method of claim 32 wherein storing the difference marker includes storing temporal data that identifies a time of occurrence of the later plurality of characteristic points.

35. The method of claim 32 wherein storing the difference marker includes storing difference data generated as a function of a comparison of the earlier plurality of characteristic points and the later plurality of characteristic points.

36. The method of claim 14 further including, for each characteristic point, storing a start time value determined as a function of a start time for the lobe in the curvature series.

37. The method of claim 14 further including, for each characteristic point, storing an end time value determined as a function of an end time for the lobe in the curvature series.

38. The method of claim 14 further including reconstructing the sampled series by connecting adjacent characteristic points with line segments.

39. The method of claim 14 further including reconstructing the sampled series by connecting adjacent characteristic points with a polynomial equation.

40. The method of claim 14 further including reconstructing the sampled series by connecting adjacent characteristic points with a cubic spline equation.

41. The method of claim 14 further including reconstructing the sampled series as a function of the area of each lobe in the curvature series.

42. The method of claim 14 further including reconstructing the sampled series as a function of a start time of each lobe in the curvature series.

43. The method of claim 14 further including reconstructing the sampled series as a function of an end time of each lobe in the curvature series.

44. The method of claim 14 wherein the sampled signal includes an electrocardiogram and further including:

identifying a plurality of characteristic points; and

delivering therapy as a function of the plurality of characteristic points.

45. A system comprising:

an input circuit adapted to receive a sampled signal;

a curvature series generator coupled to the input circuit and adapted to generate a curvature series as a function of the sampled signal; and

a memory coupled to the curvature series generator and adapted to store a plurality of characteristic points, each characteristic point having time data and amplitude data derived from the curvature series.

46. The system of claim 45 wherein the input circuit is coupled to a cardiac electrode.

47. The system of claim 45 wherein the curvature series generator includes a circuit adapted to identify a centroid of a lobe in the curvature series.

48. The system of claim 45 wherein the curvature series generator includes a circuit adapted to identify a start time of a lobe in the curvature series.

49. The system of claim 45 wherein the curvature series generator includes a circuit adapted to identify an end time of a lobe in the curvature series.

50. The system of claim 45 wherein the curvature series generator includes a processor.

51. The system of claim 45 wherein the curvature series generator includes a processor adapted to generate an area of a lobe in the curvature series.

52. The system of claim 45 further including a telemetry circuit to wirelessly communicate the plurality of characteristic points stored in the memory.

53. An implantable medical device comprising:

means for receiving a data series corresponding to a sampled signal;

means for generating a curvature series as a function of the data series;

means for identifying a plurality of characteristic points as a function of the curvature series, each characteristic point having a time component and an amplitude component; and

means for storing selected characteristic points of the plurality of characteristic points.

54. The implantable medical device of claim 53 wherein the means for identifying includes means for determining a size of a characteristic point as a function of an area of a lobe in the curvature series.

55. The implantable medical device of claim 54 further including means for selecting a characteristic point having a size greater than a predetermined value.

56. The implantable medical device of claim 53 wherein the sampled series includes an electrocardiogram and further including means for selecting a first group of characteristic points from the plurality of characteristic points, wherein the first group of characteristic points is associated with a first morphological feature of the electrocardiogram.

57. The implantable medical device of claim 56 wherein the means for storing selected characteristic points includes means for storing feature data corresponding to the first group of characteristic points.

58. The implantable medical device of claim 56 wherein the means for storing feature data includes:

means for storing a repetition marker corresponding to a repetition of the first group of characteristic points;

means for storing identification data for the first group of characteristic points; and

means for storing temporal data as a function of a time of occurrence of a second group of characteristic points, wherein the second group of characteristic points is substantially similar to the first group of characteristic points.

59. The implantable medical device of claim 56 wherein the means for storing feature data includes:

means for storing a difference marker corresponding to a difference between the first group of characteristic points and a second group of characteristic points, wherein the second group of characteristic points is associated with a second morphological feature that occurs subsequent to the first morphological feature;

means for storing identification data for the first group of characteristic points; and

means for storing temporal data as a function of a time of occurrence of the second group of characteristic points.

60. An article comprising a machine-accessible medium having associated data wherein the data, when accessed, results in a machine performing:

receiving a data series corresponding to a sampled signal;

generating a plurality of characteristic points based on a curvature series of the data series, each characteristic point generated as a function of a time of

occurrence of a lobe in a portion of the curvature series and an amplitude at the time; and

storing the plurality of characteristic points.

61. The article of claim 60 wherein the data, when accessed, further results in the machine generating each characteristic point as a function of an area of the lobe in the curvature series.

62. The article of claim 60 wherein storing the plurality of characteristic points includes storing those characteristic points having an area greater than a predetermined value and deleting those characteristic points having an area less than the predetermined value.